

ABSTRACT

A method and system is presented in radiography for optimizing image quality of an object (e.g. an anatomical region of a patient), while minimizing the radiation dose to the patient. X-ray exposure parameters, such as operating voltage (kVp), operating current (mA), focal spot size, and soft x-ray filter combination, are dynamically controlled during the x-ray exposure. During at least two different sampling intervals and at two different kVp levels, x-rays are passed through the object, and detected by sensors located between the object and the image plane. After the last sampling interval, the sensor output signals and the measured thickness of the object are used to evaluate the optimal settings for the x-ray exposure parameters. The x-ray exposure parameters are set to these optimal settings for the remainder of the exposure period.